

REMARKS/ARGUMENTS

In the Office Action issued June 27, 2008, claims 1-23 were rejected under 35 U.S.C. § 103(a) as being unpatentable over Mogenson, U.S. Patent App. Pub. No. 2004/0105460 ("Mogenson") in view of Larson et al., U.S. Patent No. 5,241,690 ("Larson"), and further in view of Walton, U.S. Patent No. 6,751,187 ("Walton").

Claims 1-23 are now pending in this application. Claims 1 and 19-23 have been amended to correct typographical errors. No new matter has been added.

The Applicant respectfully submits that claims 1-23 are not unpatentable over Mogenson in view of Larson and further in view of Walton because even if Mogenson, Larson and Walton were combined as suggested by the Examiner, the resulting combination still would not disclose or suggest the requirements of the claims. Mogenson discloses transmitting data from a first node to a second node of a communication system, in a first mode of operation transmitting data via a first communication channel in which the power level of the channel at said first node is not indicated to the second node, and in a second mode of operation transmitting said data via said first communication channel and indicating the power level of the channel at said first node to said second node. However, as indicated by the Examiner, Mogenson does not disclose leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and the threshold value indicates that the modulation and coding level should be increased, when the transmitted signal is not successfully received at the receiver, as is required by claims 1 and 19-23.

Larson discloses regulating or adjusting the transmission power when transmitting signals between a mobile station and a base station in a digital mobile telephony system. In particular, Larson discloses that the transmission power is increased when the anticipated transmission quality is less than that desired and is decreased when the anticipated quality is higher than the highest permitted quality or when the anticipated signal strength is greater than the maximum permitted value. Otherwise, the transmission power is maintained unchanged. However, Larson does not disclose or suggest does not disclose or suggest leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and the threshold value indicates that the modulation and coding level should be increase, when the transmitted signal is not successfully received at the receiver.

Walton discloses selecting transmission channels for use for data transmission and to process and transmit data over the selected transmission channels. In particular, Walton discloses a transmitter system that encodes, modulates, and weights data such that the transmitted bit rate matches the transmission capacity of the channel. The portions of Walton cited by the Examiner do not disclose leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and threshold value indicates that the modulation and coding level should increase.

For example, at col. 1, line 65 to col. 2, line 44, Walton discloses selecting transmission channels for use for data transmission and selecting coding and modulation schemes for the selected transmission channels. Walton discloses selective channel

transmission (SCT), in which only “good” transmission channels are selected for use for data transmission. The good transmission channels are defined as those that have SNR or power gains above a threshold. Walton discloses selective channel transmission used in conjunction with common coding and modulation, in which each group of transmission channels is associated with a respective coding and modulation scheme, and data for each group is coded and modulated based on the scheme selected for the group. Each group may thus be associated with (1) a respective (e.g., SNR or power gain) threshold used to select transmission channels for use for data transmission and (2) a respective coding and modulation scheme used to process data for the group. The data processing for the selected transmission channels is matched to the capacity available for these channels. Thus, this portion of Walton only discloses selecting transmission channels for use for data transmission and selecting coding and modulation schemes for the selected transmission channels and does not disclose or suggest leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and threshold value indicates that the modulation and coding level should increase.

At col. 4, lines 5-61, Walton discloses determining channel state information based on SNR, BER, and/or PER and processing (encoding, modulating, and weighting) data such that the transmitted information bit rate for each transmission channel matches the transmission capacity of the channel. The data is processed based on one or more coding and modulation schemes, which may be determined based on part on the particular transmit power allocated to the selected transmission channels. Thus, Walton discloses encoding, modulating, and weighting data based on the capacity of the channel,

where one factor in determining the capacity is SNR, BER, and/or PER. Walton is silent as to what happens to the encoding, modulating, and weighting of data when the SNR, BER, and/or PER changes. Thus, Walton never explicitly states that the encoding, modulating, and weighting of data is left unchanged when the SNR, BER, and/or PER changes. Further, Walton's silence on this point cannot fairly be construed to be a suggestion of the claimed requirement.

At col. 14, line 61 to col. 15, line 43, Walton discloses a technique for determining an optimum code rate for given channel conditions. In particular, Walton discloses that as the code rate increases, more information bits may be transmitted per information symbol, but the required SNR also increases. The maximum achievable throughput for each code rate may be computed and the specific code rate that provides the highest throughput may be deemed as the optimum code rate for the specific channel conditions being evaluated. Further, the optimum threshold and optimum throughput may also be determined based on the channel conditions. However, the clear implication of the portion of Walton is that as the channel conditions change, the optimum code rate, threshold, and throughput also changes. This does not disclose or suggest leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and threshold value indicates that the modulation and coding level should increase.

At col. 29, lines 22-64, Walton discloses generation of the CSI. In this portion, Walton explicitly discloses changing certain transmission parameters based on changes in signal quality. For example, Walton discloses that requesting more transmit power

indicates that the received SNR for the associated transmission channel(s) has degraded, and a request for less transmit power indicates that the received SNR has improved. This portion of Walton is silent as to the selection of coding and modulation. Thus, this portion of Walton does not disclose or suggest leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and threshold value indicates that the modulation and coding level should increase. To the contrary, this portion of Walton explicitly teaches changing transmission parameters in response to changing channel conditions. Therefore, this portion of Walton does not disclose or suggest the claimed requirements.

As a result of the above points, it is clear that Walton does not disclose or suggest leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and threshold value indicates that the modulation and coding level should increase. Even if Mogenson, Larson, and Walton were combined as suggested by the Examiner, the resulting combination still would not disclose or suggest leaving a selected modulation and coding level unchanged even though the comparison between a signal transmission quality and threshold value indicates that the modulation and coding level should increase.

Therefore, claims 1-23 are not unpatentable over Mogenson in view of Larson and further in view of Walton.

Each of the claims now pending in this application is believed to be in condition for allowance. Accordingly, favorable reconsideration of this case and early issuance of the Notice of Allowance are respectfully requested.

Additional Fees:

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with this application to Deposit Account No. 50-4545 (5243-042-US01).

Conclusion

In view of the foregoing, all of the Examiner's rejections to the claims are believed to be overcome. The Applicants respectfully request reconsideration and issuance of a Notice of Allowance for all the claims remaining in the application. Should the Examiner feel further communication would facilitate prosecution, he is urged to call the undersigned at the phone number provided below.

Respectfully Submitted,

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